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(71)Applicant: TOYOTA CENTRAL RES & DEV LAB INC

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(72)Inventor: USUKI ARIMITSU

MIZUTANI TADASHI FUJIMOTO SHIGERU

KURAUCHI NORIO

UEGAKITO OSAMI

(54) COMPOSITE MATERIAL AND PRODUCTION THEREOF

(57)Abstract:

PURPOSE: To obtain a composite material having excellent mechanical strength, heat resistance, etc., by making an ion exchange between a specific laminar clay mineral and a specific onium salt, mixing th resulting clay mineral with a monomer for a thermosetting resin and/or its oligomer and polymerizing the mixture.

CONSTITUTION: A laminar clay mineral having a cation exchange capacity of 50W200 millequivalents/100g, a layer thickness of 7W12Å and a distance of at least 30Å between layers (e.g., montmorillonite) is prepd. There is made an ion exchange between said clay mineral and at least one onium self having a group at its terminal or on its side chain, and group acting as a polymn, initiator or a or selinking agent or forming a terminal grown by polymn, (e.g., ammonium 12-aminododecanate). Th resulting clay mineral is mixed with a monomer for a thermosetting resin (e.g., a phenolic resin) and/or it oligomer. The monomer and/or the oligomer in the mixture arc/is polymerized to obtain the desired composite material.

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